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10/550,127	11/28/2006	Isabelle Dubois	38624-100474	9636

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EXAMINER	
CHRISTIE, ROSS J	
ART UNIT	**PAPER NUMBER**
1731	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Patent-ch@btlaw.com

Office Action Summary	Application No.	Applicant(s)	
	10/550,127	DUBOIS ET AL.	
	Examiner	Art Unit	
	ROSS J. CHRISTIE	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 October 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 1-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

2. Applicants amended claim 1 to recite in part "a non-emulsified terpene derivative composition". When reading Applicants' amended claim 1, the amended claim language reads the non-emulsified composition is a terpene derivative.

3. However, Applicants' specification discloses at page 2, lines 8-14, the following:

> *"It has now been found that the application to the mould of a composition without water containing an ester of a fatty acid having at most 18 carbon atoms and of a neopentyl polyol containing at least 3 hydroxyl groups allows this aim to be achieved.*
> *A composition of this type, the water concentration of which is less than 0.2 %, and which is therefore non-emulsified, is also known in the technical field as a "whole oil". It therefore allows problems of stability, which are inherent to a formulation in emulsion, to be overcome."*

4. In addition, Applicants' specification also discloses at page 3, ll. 10-11, the following:

> *According to one particular embodiment of the invention, the mould release composition contains, in addition to the aforementioned ester, one or more terpene derivatives.*

5. Applicants' specification discloses the non-emulsified composition is not a terpene derivative but merely contains a terpene derivative. Applicants' claimed non-emulsified composition is based upon an ester of a fatty acid having at most 18 carbon atoms and of a neopentyl polyol containing at least 3 hydroxyl groups, not a terpene derivative. Hence, Applicants' amended claim 1 contains new matter. Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1 and 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 5,100,697 to Nielsen (hereinafter “Nielsen”) in view of United States Patent No. 6,169,124 to Horn (hereinafter "Horn").

Referring now to Applicants’ claims 1 and 5-8, Nielsen teaches a non-emulsified composition for use as a mold release agent (See Abstract; col. 1, ll. 10-13; col. 8, l. 23 – col. 12, l. 24 of Nielsen). The non-emulsified composition contains a fatty acid ester (col. 8, l. 23 – col. 11, l. 52 of Nielsen). The alcohol moiety of the ester is derived from a monoalcohol of the formula (I) R_1OH or (II) R_2O-R_3-OH (col. 8, l. 48 - col. 9, l. 7 of Nielsen). The alcohol moiety of formula (I) or (II) of Nielsen encompasses amyl alcohol, also known as neopentyl alcohol. The acid moiety in the esters may be derived from an aliphatic monocarboxylic acid of the formula R_4COOH in which R_4 is a straight or branched, saturated or unsaturated hydrocarbyl group of 1-30 carbon atoms and optionally substituted by one or more hydroxy groups, the acid moiety preferably being derived from a saturated carboxylic acid (col. 9, ll. 8-14 of Nielsen). Another preferred class of acid moieties is derived from unsaturated acids such as oleic acid, or ricinoleic acid, e.g. 2-ethyl-hexyl oleate and isobutyl oleate (col. 9, ll. 26-28; both oleic and ricinoleic acids are tall oil fatty acids). The acid moiety of formula (I) or (II) of Nielsen

encompasses Applicants' claim term "a fatty acid having between 4 and 24 carbon atoms".

Further examples of esters in the mold release compositions of Nielsen are esters wherein the alcohol moiety is derived from a dialcohol of the formula (IIa), (IIb), or (IIc) (col. 9, l. 59 - col. 10, l. 15 of Nielsen). The alcohol moiety of formula (IIa) and (IIb) of Nielsen encompasses neopentyl dialcohol. Neopentyl dialcohol is not “a neopentyl alcohol containing at least three hydroxyl groups" per Applicants' claim language.

However, Horn teaches producing self-releasing, compact or cellular moldings which comprise, among other constituents, (d) internal mold release agents (See Abstract of Horn). Horn teaches suitable alcohols for preparing the (d) internal mold release agents are accordingly those of the formula (hereinafter referred to as component A) R^3-(-~~O~~H)$_m$(X) (col. 12, l. 9 - col. 19, l. 43 of Horn). A specific alcohol is neopentyl alcohol (col. 16, l. 60 – col. 17, l. 14 of Horn). Preferred alcohols include both erythritol and pentaerythritol (col. 18, ll. 10-23 of Horn), which are both “neopentyl polyol[s] containing at least hydroxyl groups" per Applicants’ claim language.

At the time the invention was made a person having ordinary skill in the art would recognize the neopentyl polyols of Horn could be substituted for the neopentyl dialcohol. Both Nielsen and Horn teach mold release compositions and recognize neopentyl alcohols in general are suitable for use as mold release agents. Hence, Nielsen provides both the suggestion and requisite motivation to utilize Horn and modify Nielsen’s teachings to incorporate neopentyl polyols of Horn taught therein. **MPEP 2144.07**

Referring now to Applicants' claims 9 and 10, Nielsen teaches the compositions in non-emulsified form comprise the oily esters in an amount of 26-100% optionally in admixture with additives, may be used per se in form of a homogeneous liquid (col. 12, ll. 20-23 of Nielsen). The range of 26-100% of oily esters by weight of the composition overlaps Applicants' claimed ranges of "10 and 100% by weight" and "between 20% and 60% by weight". **MPEP 2144.05**

10. Claims 4, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 5,100,697 to Nielsen (hereinafter "Nielsen") in view of United States Patent No. 6,169,124 to Horn (hereinafter "Horn") as applied to claims 1 and 5-10 above, and further in view of United States Patent No. 1,440,356 to Morrell (hereinafter "Morrell").

Referring now to Applicants' claims 4, 14 and 15, Nielsen and Horn do not teach adding a "component of inorganic origin" to the modified mold release composition.

However, Morrell teaches the oils taught therein, which encompasses both vegetable oil and pine oil, include cycloparaffinic oil in an amount of 1.0% (page 8, ll. 7-9; l. 122 - page 9, l. 13 of Morrell).

At the time the invention was made a person having ordinary skill in the art would recognize an inorganic component such as cycloparaffinic oil of Morrell could be added to the release agent composition of Nielsen as modified by Horn. Nielsen teaches adding retarding agents and Morrell teaches cycloparaffinic oils have the same properties and characteristics as vegetable oil and pine oil. Nielsen provides the

suggestion to utilize retarding agents and Morrell provides the motivation to utilize solid paraffins and cycloparaffinic oil. Hence, a person having ordinary skill in the art would recognize the suitability of adding cycloparaffinic oils to the modified mold release composition taught by Nielsen and Horn. **MPEP 2144.07**

11. Claims 2, 3, 11, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 5,100,697 to Nielsen (hereinafter “Nielsen”) in view of United States Patent No. 6,169,124 to Horn (hereinafter "Horn") as applied to claims 1 and 5-10 above, and further in view of World Intellectual Property Organization Patent Application Publication No. 02/081121 A2 to Alice SPA (hereinafter “Petrocchi”) and United States Patent No. 1,440,356 to Morrell (hereinafter “Morrell”).

Referring now to Applicants’ claims 2, 3, 11, 12 and 13, Nielsen teaches the use of only slightly reactive esters which may replace mineral oil as the inert hydrophobic material, in conventional release compositions in non-emulsified form (col. 8, ll. 30-34 of Nielsen). Nielsen teaches it is possible by modifying the composition, e.g., by selecting esters derived from a short-chained alcohol to obtain a monoester with the same retarding effect as vegetable oil (col. 8, ll. 40-44 of Nielsen). Nielsen teaches a preferred composition comprises 65-99%, preferably 80-97%, by weight of the esters, the remaining part of the composition being wetting agents, corrosion inhibitors and retarding agents (col. 8, ll. 45-48 of Nielsen). Although Nielsen teaches mineral oil should no longer be utilized, Nielsen still utilizes natural vegetable oils as a retarding agent (col. 28, ll. 25-31; col. 29, ll. 23-27 of Nielsen). Nielsen teaches using

approximately 5% by weight of vegetable oil by weight of the mold releasing composition (col. 28, l. 25 – col. 29, l. 27). Nielsen does not teach using terpene derivatives as a retarding agent to modify the viscosity of the mold release composition.

However, Morrell teaches a relationship between vegetable oil and distillates of turpentine, rosin spirits, pine oil and acetone oil (page 8, l. 122 - page 9, l. 13 of Morrell; pine oil is a natural terpene alcohol, and distillates of turpentine and pine oil are both equivalent to Applicants' claim terms “terpene derivatives” and “plurality of terpineol isomers"). Morrell teaches all of these substances are practically insoluble in water, possess a characteristic greasy touch and have a low surface tension (page 8, l. 122 - page 9, l. 13 of Morrell). Although Morrell teaches such a relationship, Morrell does not teach using terpene derivatives in a mold release composition.

However, Petrocchi teaches releasing agents for die-cast molding processes of nonferrous materials and, in particular, a releasing agent composition containing pine oil (See Abstract of Petrocchi; page 7, ll. 20-27; page 9, Examples 1-3 of Petrocchi).

At the time the invention was made a person having ordinary skill in the art would have modified Nielsen and substituted the vegetable oil retarding agent with the terpene derivative of Petrocchi based upon the known similar characteristics and properties of vegetable oil and pine oil taught by Morrell. Morrell provides the suggestion that vegetable oil and pine oil have similar properties and characteristics, and Petrocchi provides the motivation to make such a substitution as Petrocchi utilizes pine oil in its releasing agent composition. **MPEP 2144.07**

12. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 5,100,697 to Nielsen (hereinafter “Nielsen”) in view of United States Patent No. 6,169,124 to Horn (hereinafter "Horn"), and further in view of United States Patent No. 1,440,356 to Morrell (hereinafter “Morrell”) as applied to claims 4, 14 and 15 above, and further in view of World Intellectual Property Organization Patent Application Publication No. 02/081121 A2 to Alice SPA (hereinafter “Petrocchi”) and United States Patent No 5,523,025 to Erilli (hereinafter “Erilli”).

Referring now to Applicants’ claims 16 and 17, Nielsen teaches a preferred composition comprises 65-99%, preferably 80-97%, by weight of the esters, the remaining part of the composition being wetting agents, corrosion inhibitors and retarding agents, such as vegetable oil (col. 8, ll. 45-48; col. 28, l. 25 – col. 29, l. 27 of Nielsen). Nielsen as modified by Horn and Morrell does not teach using “between 70 and 10% by weight terpene derivatives” or “between 50 and 65% by weight terpene derivatives” according to Applicants’ claim language.

However, Petrocchi teaches releasing agents for die-cast molding processes of nonferrous materials and, in particular, a releasing agent composition containing pine oil (See Abstract of Petrocchi; page 7, ll. 20-27; page 9, Examples 1-3 of Petrocchi).

However, Erilli teaches water insoluble hydrocarbons or essential oils (e.g., terpenes) such as from about 0% to about 80% are incorporated into the compositions taught therein (col. 3, ll. 38-40; col. 4, ll. 4-7, 25-26, 36-39 of Erilli).

At the time the invention was made a person having ordinary skill in the art would recognize water insoluble hydrocarbons such as terpene of Erilli can be incorporated in

the amounts taught by Erilli into the modified mold releasing agent composition of Nielsen, Horn and Morrell based upon the teachings of Petrocchi wherein terpene derivatives are suitable for use in mold release compositions. **MPEP 2144.07**

Response to Arguments

13. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

14. Examiner agrees with Applicants' remarks that there is no suggestion or motivation to modify the teachings of van Hoorn using Nielsen and, in particular, substituting an emulsified composition of van Hoorn with a non-emulsified composition of Nielsen. And, Examiner also acknowledges Applicants' assertions that Erilli and Feustel seem to be non-analogous art when the starting point is van Hoorn's teachings modified by Nielsen.

15. In light of Applicants' remarks, the examiner conducted an updated search of the prior art, found new prior art that seems more relevant to mold release compositions, and has set forth new rejections against the pending claims. It is the examiner's opinion the Erilli reference is more analogous when considering the totality of the teachings of the newly cited prior art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROSS J. CHRISTIE whose telephone number is

(571)270-3478. The examiner can normally be reached on Monday-Friday 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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